Digital Blood Pressure Monitor for the Upper Arm

Geratherm®
desktop 2.0

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INSTRUCTION MANUAL

GT-6630

CE 0118

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Caution

1. Consult your physician to verify your blood pressure range before measuring it at home with this unit.
2. If the cuff causes any discomfort during measurement, press the START button to turn off the unit immediately.
3. If the pressure is over 300mmHg and the cuff does not deflate automatically, pull off the Velcro strap to detach the arm cuff.

Blood pressure measurements obtained with this unit are equivalent to those obtained by a trained person using the cuff/stethoscope auscultation method.

WARRANTY:
Three years from the date of purchase.

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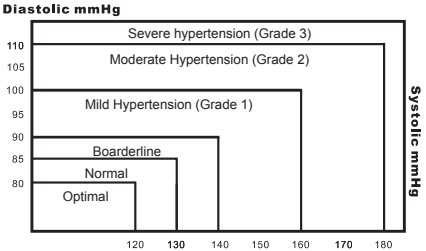
What is blood pressure?
A force is created by the heart as the ventricle forcibly ejects blood into the blood vessels and through the vascular system. Another force is created by the arteries as they resist the blood flow. Blood pressure is the result of these two forces.

What are systolic and diastolic blood pressures?
Systolic blood pressure is the highest pressure at the heart‘s maximum contraction. Diastolic blood pressure is the lowest pressure when the heart is resting.

Comparison to WHO recommendations

See the following blood pressure classification chart released by the WHO (World Health Organization) for evaluation of your blood pressure level.



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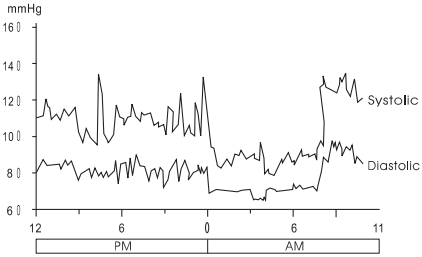
Blood pressure classification	Systolic BP mmHG	Diastolic BP mmHg	Color indicator
Optimal	< 120	< 80	6x Green
Normal	120 – 129	80 – 84	3x Green
High – Normal	130 – 139	85 – 89	6x Yellow
Stage 1 Hypertension	140 – 159	90 – 99	2x Red
Stage 2 Hypertension	160 – 179	100 – 109	4x Red
Stage 3 Hypertension	>= 180	>= 110	6x Red

What about low blood pressure?
In general, a lower blood pressure reading is better unless it causes unpleasant symptoms such as fainting and/or lightheadedness.

Fluctuation and variation in blood pressure
The following chart shows possible blood pressure fluctuations during a 24-hour period.



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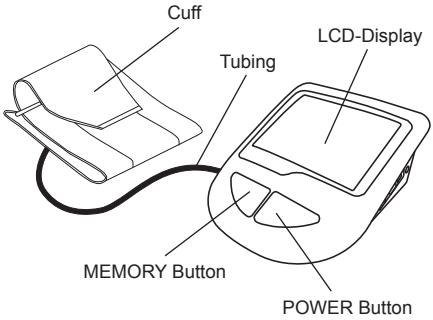
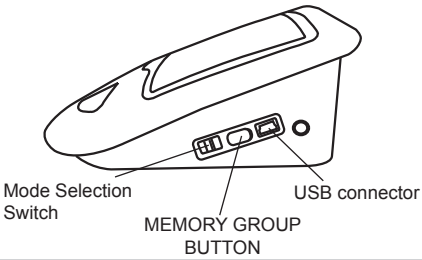
The following factors will influence blood pressure measurement results and cause variations.

- Bathing
- Conversation
- Drinking alcohol
- Exercise
- Moving
- Mental tension
- Eating
- Temperature changes
- Thinking
- Smoking etc.
- Breathing



The cuff is designed to fit arm sizes between 22 and 32cm (8.7 to 12.6 inches).



Function Descriptions

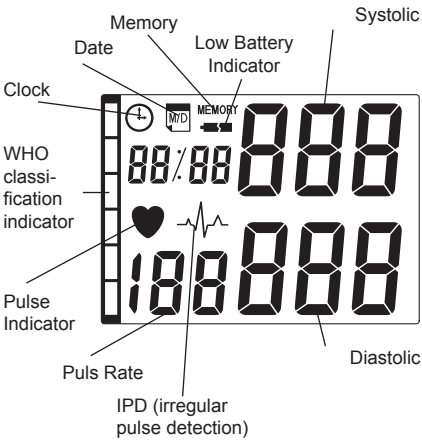
The Geratherm desktop 2.0 has a combination of 2 measuring methods in one measuring procedure – the so-called „Double Check Technology“ (DCT). This intelligent measuring method measures the blood pressure values during inflation and deflation and guarantees excellent measuring results and highest accuracy.

For rapid measuring results you can switch to the established „fuzzy logic“ mode (measurement during release of pressure only).

The blood pressure monitor provides a USB connector plus analysis software, enabling easy transfer to the computer and evaluation of the blood pressure values.

Furthermore Geratherm desktop 2.0 has arrhythmia detection (pulse arrhythmia detection), 50 memory locations for 2 persons, WHO classification (classification of blood pressure values as per World Health Organisation standards) and backlight of display.

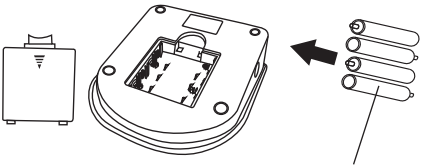
Explanation of Display Symbols



Installing/Replacing Batteries

1. Insert the batteries into the battery compartment matching correct polarities “+” and “-”.
2. Replace all batteries if the low battery indicator appears.
3. Remove the batteries if the unit will not be used for a long period of time.

Note:
It is recommended that the same type of alkaline batteries be used to avoid incompatibility.



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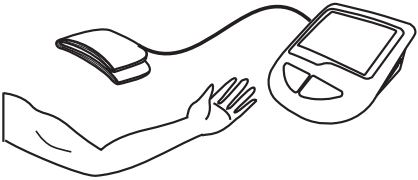
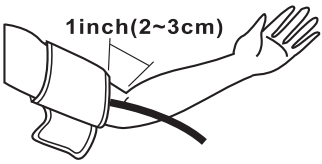
Please dispose of defective appliances and used batteries in compliance with statutory regulations (disposal in general household waste is prohibited!).

Attaching the Pressure Cuff

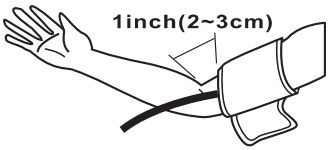
1. Wrap the cuff around the left arm. The arm should be bare.



2. Fasten the cuff. Don't pull it too strongly or make the cuff too tight. The edge of the cuff should be approximately 1 inch from the crease of your elbow.



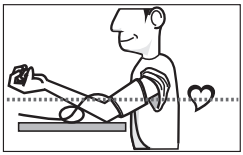
3. Attach the cuff on the right arm as shown in the figure if it is not possible to measure on the left arm.



Measuring Posture

1. Sit upright and ensure that the cuff is at heart level. Relax and retain a natural posture during measurement.

2. Measure and record blood pressure at the same time every day to establish your blood pressure pattern.



AC Adapter
It is possible to use a stabilized AC adapter (output 6 V DC/800 mA) to operate the device.

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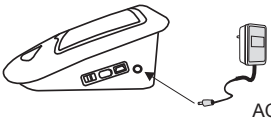

AC-Adapter

Note:
1. No power is taken from the batteries while the AC adapter is connected to the device.
2. If AC adapter power is interrupted during measurement, the device must be reset by disconnecting the AC adapter from the device.
3. Please use only the power adapter supplied by Geratherm. Using commercially available power adapters may damage your blood pressure gauge.

Power source
4 alkaline “AA” type batteries (1.5 V) or
stabilized AC/DC adapter
6 V DC 800 mA

Setting the Clock and Date

With the unit switched off, press the MEMORY button until the display shows a blinking year.

Press the START button to adjust the year while it is blinking.

Then press the MEMORY button again; the month will appear and blink. Adjust the month using the START button.

Repeat these operations for entering date, hour and minute.

Measuring Blood Pressure

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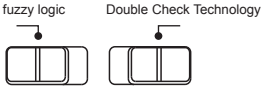
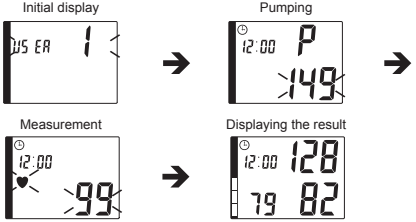
You may choose between 2 measuring modes: fuzzy logic (measurement during deflation) and Double Check Technology (measurement during inflation and deflation). Select prefered measuring mode using the buttons on the side of the unit.



Press the MEMORY GROUP button to choose the desired memory group where you would like to store the measuring values (the default setting is memory group number 1).

You may also select or change the memory group by pressing the button after measurement (values are shown on the display).

Press START to start measuring.



When the measurement is completed, the display will show the measured blood pressure values, pulse rate, memory group, date/time and WHO color classification.

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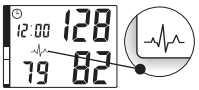
Press START to turn off the unit. Otherwise it will turn off automaitcally after about 150 seconds.

As regards the WHO classification, please read on page 26.

Note:
If the symbol "〜" appears, it means the unit has detected irregular pulse during measurement. If the symbol appears regularly please consult a qualified physician for professional advice.



Recalling Memory Values

Press the MEMORY GROUP button to choose the desired memory group.

Press MEMORY to recall the last stored measurement value.
Press MEMORY again to go to previous memory values.

Erasing Memory Values

You may erase one or all memory values.

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Erasing one memory value

1. Press the MEMORY GROUP button to choose the desired memory group.
2. Press and release MEMORY to display the memory values. Press and release MEMORY again to choose the memory value that you wish to erase.
3. Press and hold the START button until the display shows “dEL”.
4. Press and release the START button again. The unit erases the memory value after the third beep.

Erasing all memory values

1. Press the MEMORY GROUP button to choose the desired memory group.
2. Press and release MEMORY to display the memory values.
3. Press and hold the START button until the display shows “dEL”.
4. Press MEMORY and display shows “dEL ALL”.
5. Press and hold START. The unit erases all memory values after the third beep.

Data Transfer and Analysis via desktop 2.0 Software

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The software and the instructions you will find on our homepage via the following link: http://www.geratherm.com/en/health-care-3/download-area/.

Do not drop the unit. It is not shock-proof.	
Do not modify or disassemble the unit or the arm cuff.	
Do not twist the arm cuff.	
Use a cloth moistened with water or neutral detergent to clean the body of the unit and then wipe it dry.	

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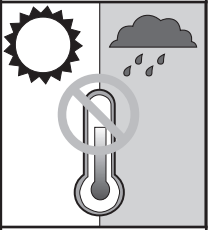
Avoid thinner, benzine, and other harsh cleaners.	
Keep the unit in a suitable place. Avoid high temperature, direct sunlight, high moisture, and dust.	
Remove the batteries if the unit will not be used for a long time.	
Do not press the START button if the cuff has not been properly wrapped around the arm.	

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Messages	Corrections
LL Err	The pressure measured was lower than 20mmHg. **Please measure again.**
UU Err	The pressure measured was higher than 300mmHg. **Please measure again.**
P Err	Pumping error. **Please check cuff and try again**
rr Err	The pressure can not be measured due to signal noise. **Please measure again.**
HI	The pumping pressure is higher than 300mmHg. **Please measure again.**
	Low battery. **Check and replace the 4 batteries if necessary.**

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Specifications

Display System	Liquid Crystal Display
Measuring Method	Oscillometric method
Inflation	Centrifugal micro-pump
Pressure Exhaust	Electric solenoid valve
Power Source	4 alkaline “AA“ type batteries (1.5V) or AC/DC adapter
Measuring Range	Blood pressure measuring range: 20-300mmHg Heart pulse rate range: 40-200 pulse beats/min
Accuracy	±3mmHg (blood pressure) ±5% (pulse rate)
Memory	2 x 50 memory values with date and time displayed
Low Battery Indicator	yes
Battery Life	around 250 measurements
Auto Power-Off	after 150 sec.
Operating Environment	+5°C-+40°C; RH<90%
Storage Environment	-20°C-+55°C; RH<90%
Dimensions	168mm x 140mm x 64mm
Weight	484 g (incl. batteries)

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Specifications are subject to change without notice for purposes of product improvement.

It is recommended that the unit be calibrated by an authorised laboratory every two years.

Disposal

Observe the applicable regulations when discarding the device and batteries.
This product must not be disposed of together with domestic waste.
All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner.

Please remove the batteries before disposing of the device/unit.

Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop.

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Guarantee of Quality

The unit meets the requirements of Council Directive 93/42/EEC concerning medical devices. A Quality Management System, certified according to EN ISO 13485:2003, guarantees that the product complies with the required quality criteria.
The blood pressure monitor conforms to EN 1060-1 (Non-invasive sphygmomanometers part 1: General requirements) and EN 1060-3 (Non invasive sphygmomanometers part 3: Supplementary requirements for electromechanical blood pressure measuring systems).